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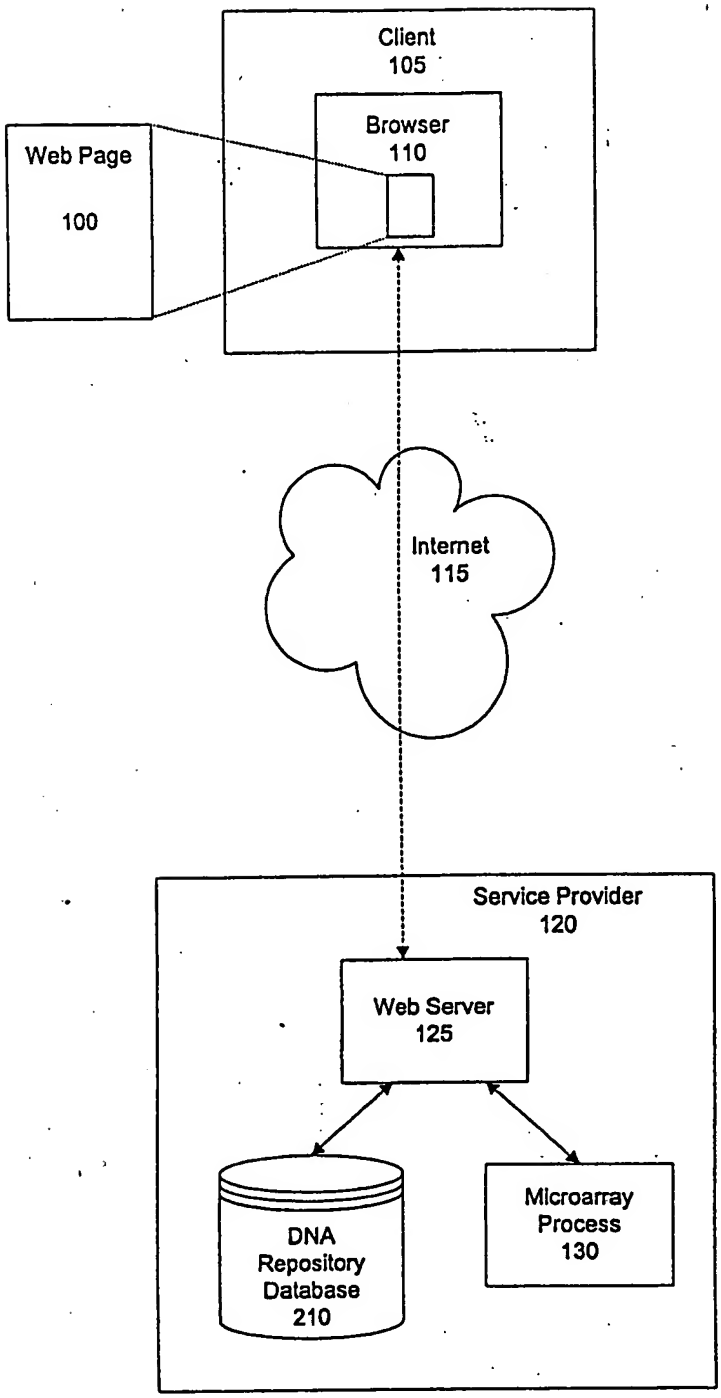
Client
105
Browser
110
Web Page
100
Internet
115
Service Provider
120
Web Server
125
DNA
Repository
Database
210
Microarray
Process
130

FIG. 1

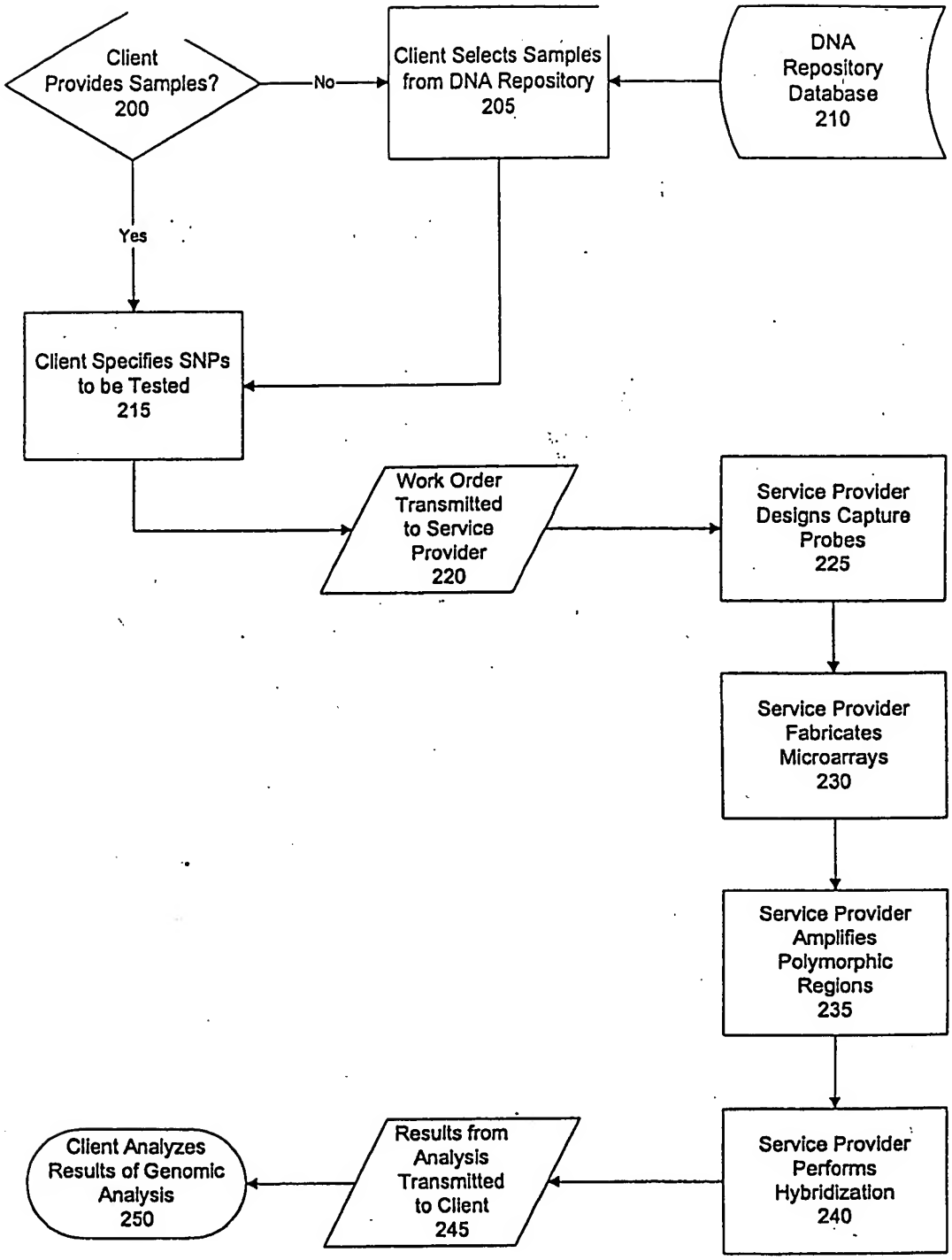
Client Provides Samples? 200
No
Client Selects Samples from DNA Repository 205
DNA Repository Database 210
Yes
Client Specifies SNPs to be Tested 215
Work Order Transmitted to Service Provider 220
Service Provider Designs Capture Probes 225
Service Provider Fabricates Microarrays 230
Service Provider Amplifies Polymorphic Regions 235
Service Provider Performs Hybridization 240
Results from Analysis Transmitted to Client 245
Client Analyzes Results of Genomic Analysis 250

FIG. 2

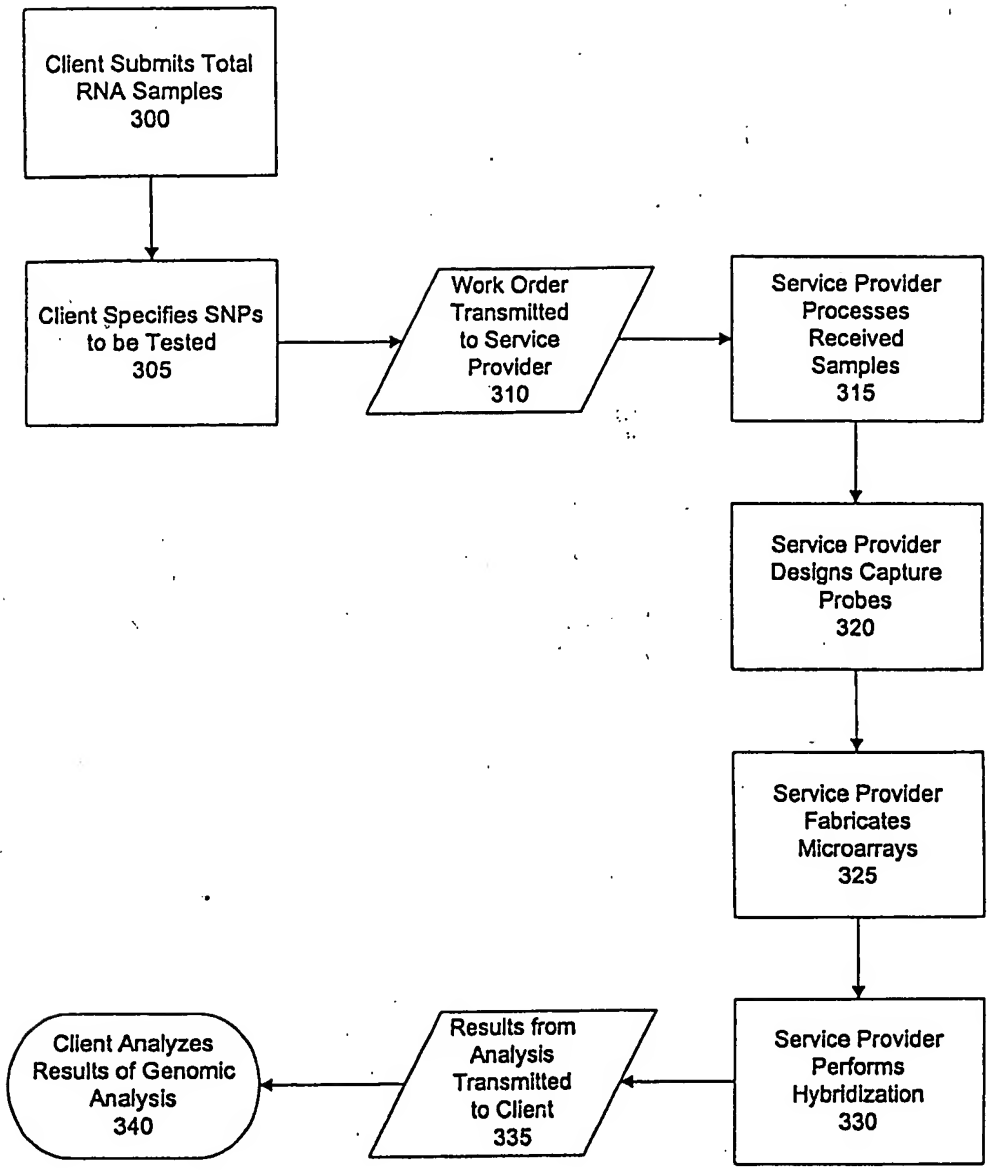
Client Submits Total RNA Samples 300
Client Specifies SNPs to be Tested 305
Work Order Transmitted to Service Provider 310
Service Provider Processes Received Samples 315
Service Provider Designs Capture Probes 320
Service Provider Fabricates Microarrays 325
Service Provider Performs Hybridization 330
Results from Analysis Transmitted to Client 335
Client Analyzes Results of Genomic Analysis 340

FIG. 3

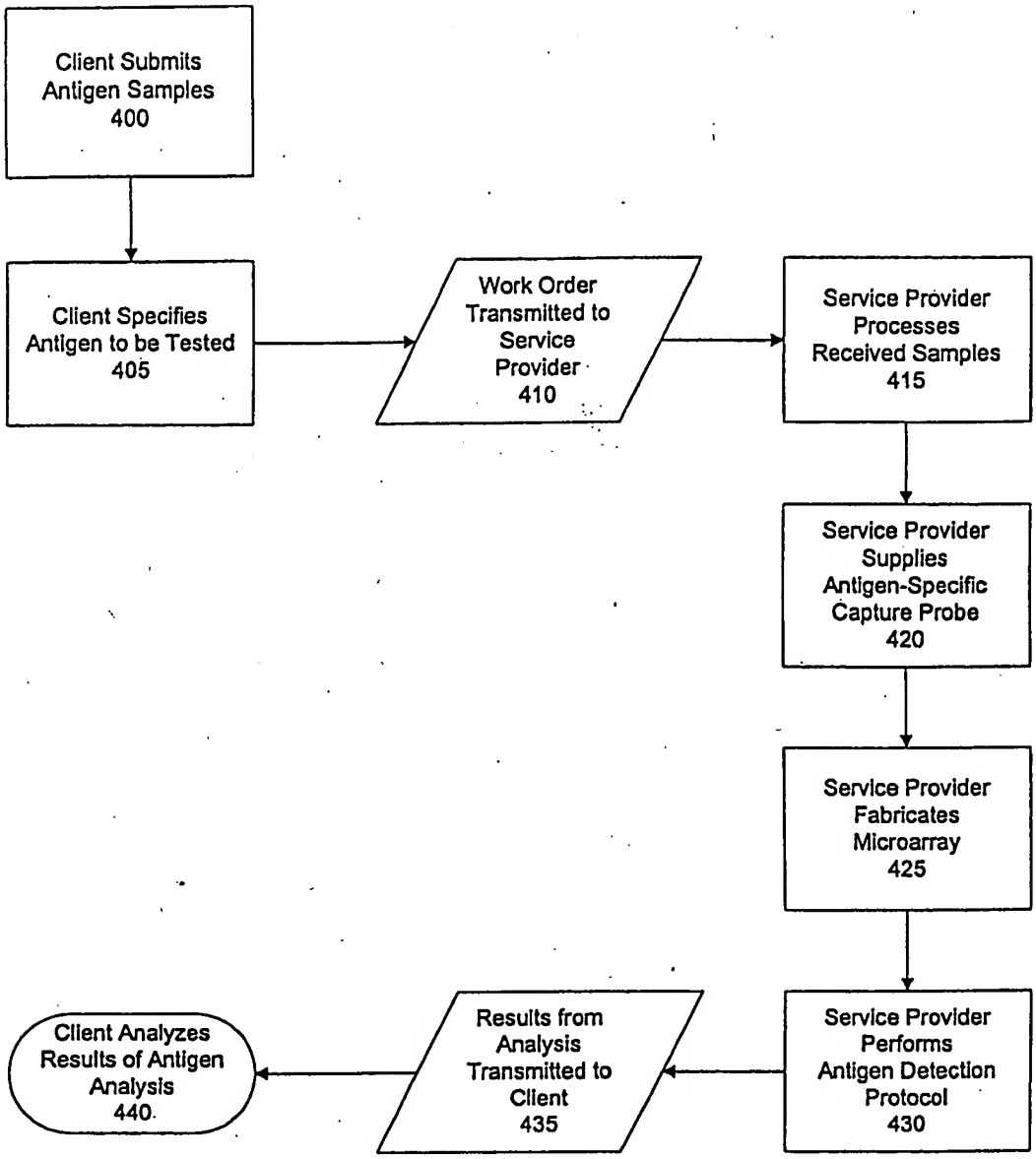
Client Submits Antigen Samples 400
Client Specifies Antigen to be Tested 405
Work Order Transmitted to Service Provider 410
Service Provider Processes Received Samples 415
Service Provider Supplies Antigen-Specific Capture Probe 420
Service Provider Fabricates Microarray 425
Service Provider Performs Antigen Detection Protocol 430
Results from Analysis Transmitted to Client 435
Client Analyzes Results of Antigen Analysis 440

FIG. 4

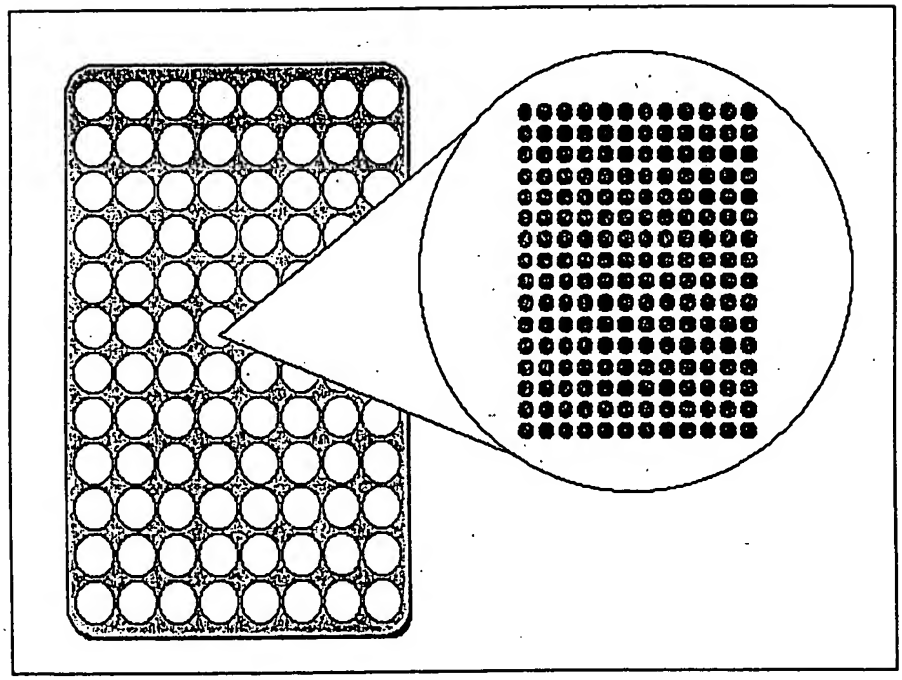

FIG. 5

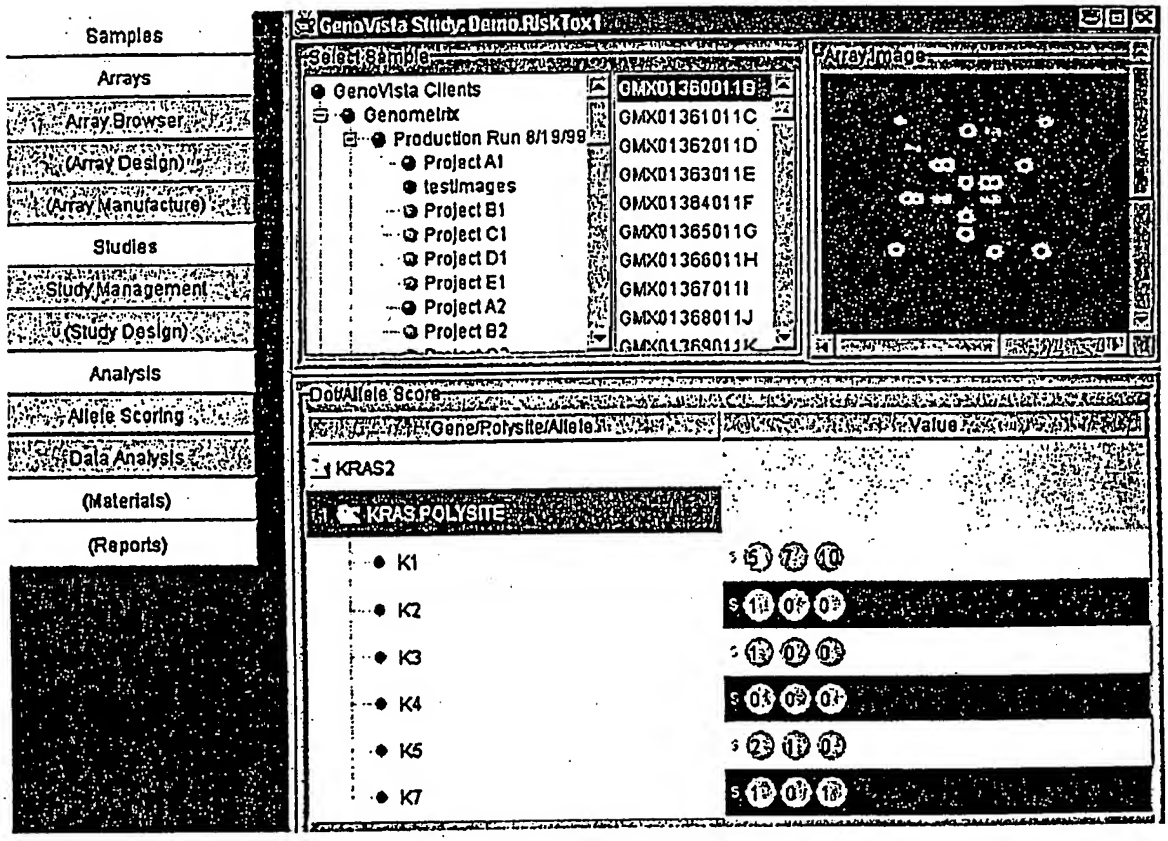
Samples
Arrays
Array Browser
(Array Design)
(Array Manufacture)
Studies
Study Management
(Study Design)
Analysis
Allele Scoring
Data Analysis
(Materials)
(Reports)
GenoVista Study: Demo.RiskTox1
Select Sample
GenoVista Clients
Genometrix
Production Run 8/19/99
Project A1
testimages
Project B1
Project C1
Project D1
Project E1
Project A2
Project B2
GMX01360011B
GMX01361011C
GMX01362011D
GMX01363011E
GMX01364011F
GMX01365011G
GMX01366011H
GMX01367011I
GMX01368011J
Array Image
DotAllele Score
Gene/Polysite/Allele
Value
KRAS2
KRAS.POLYSITE
K1
K2
K3
K4
K5
K7

FIG. 6

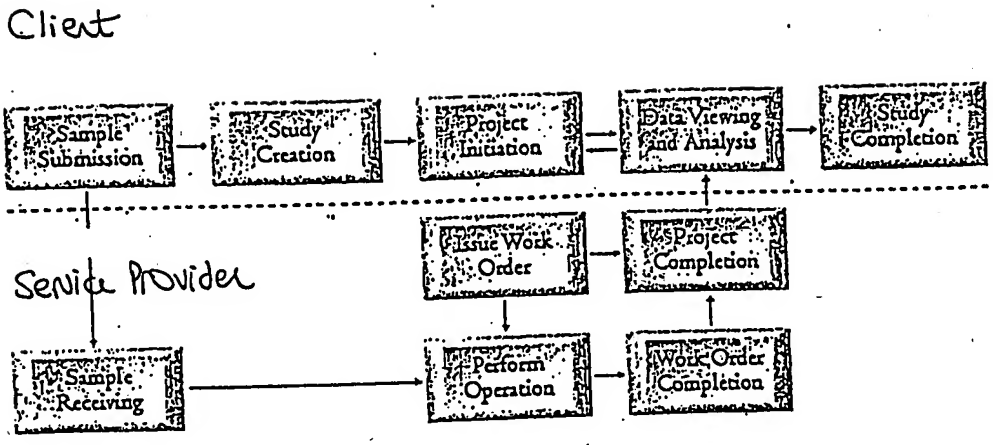
Client
Sample Submission
Study Creation
Project Initiation
Data Viewing and Analysis
Study Completion
Service Provider
Issue Work Order
Project Completion
Sample Receiving
Perform Operation
Work Order Completion

FIG. 7

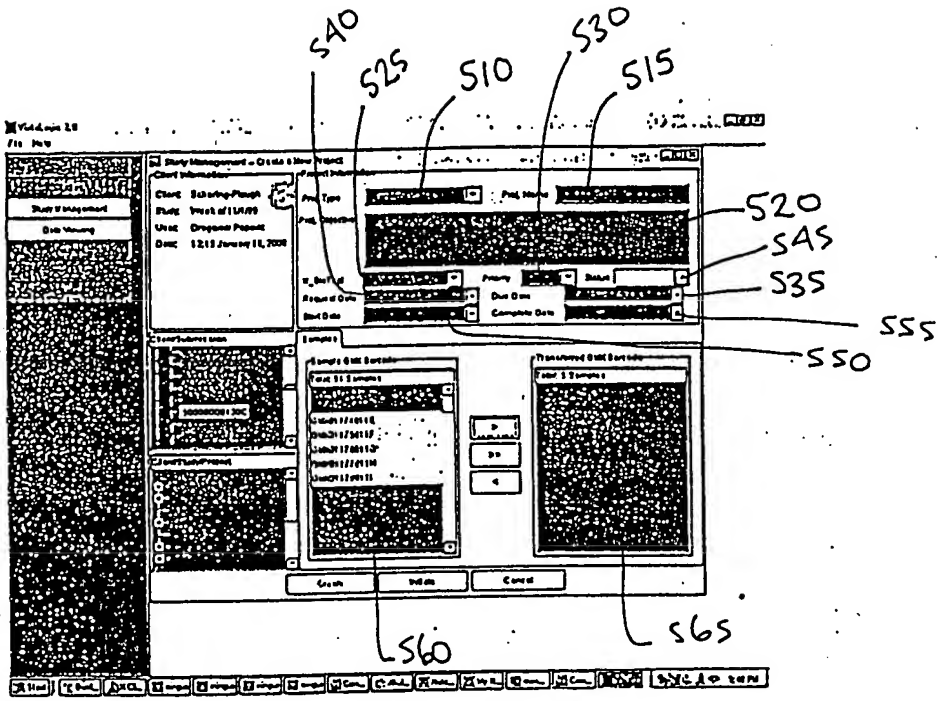

FIG. 8

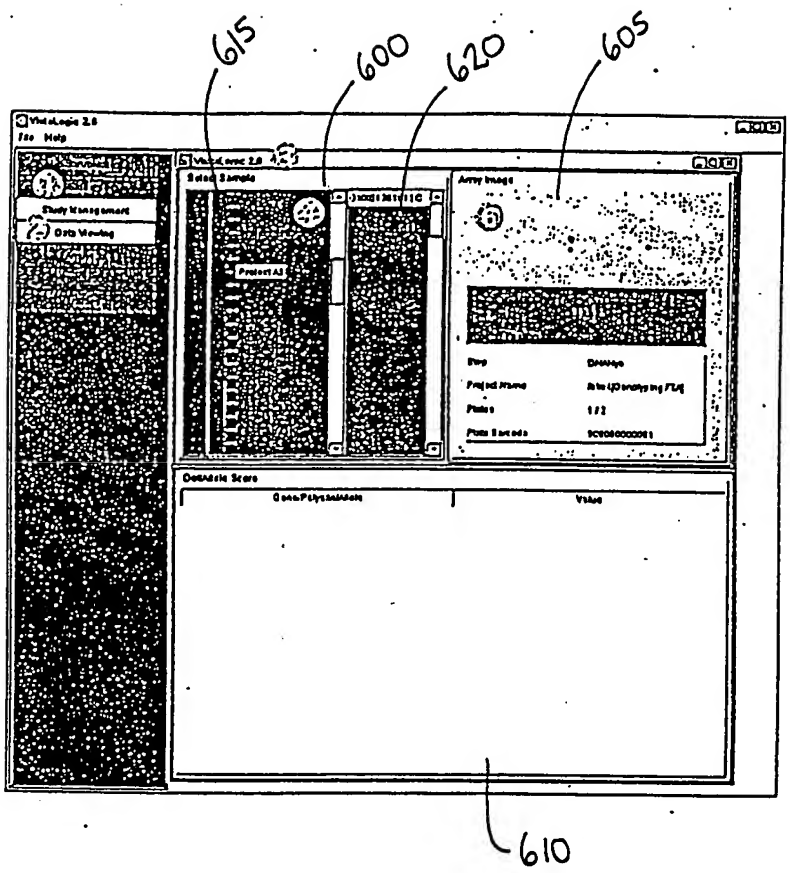

FIG. 9

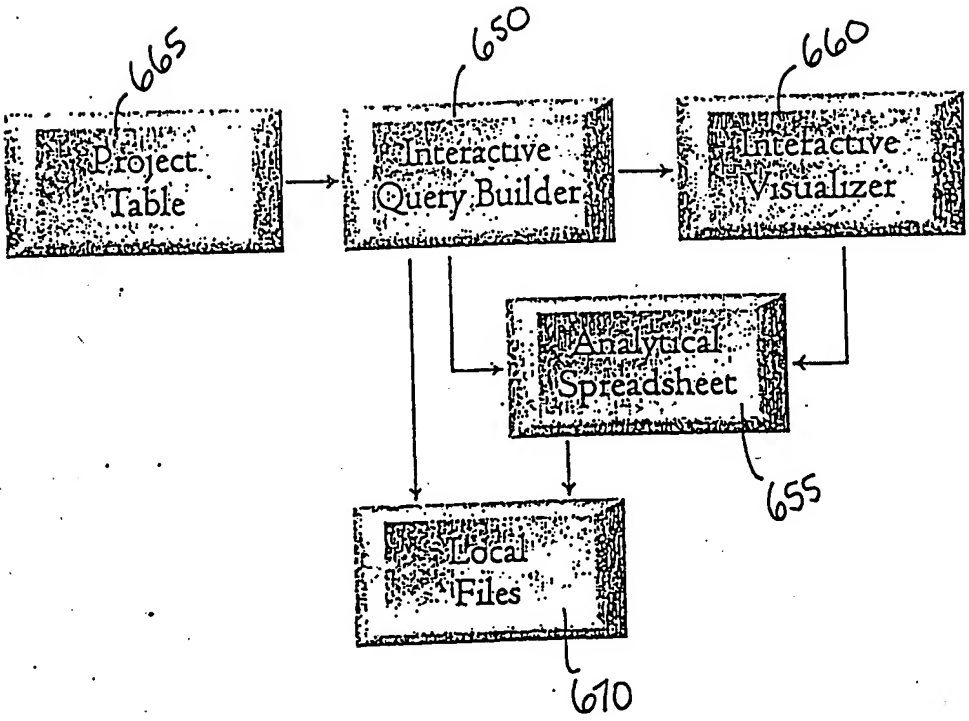
665
650
660
Project Table
Interactive Query Builder
Interactive Visualizer
Analytical Spreadsheet
655
Local Files
610

FIG. 10

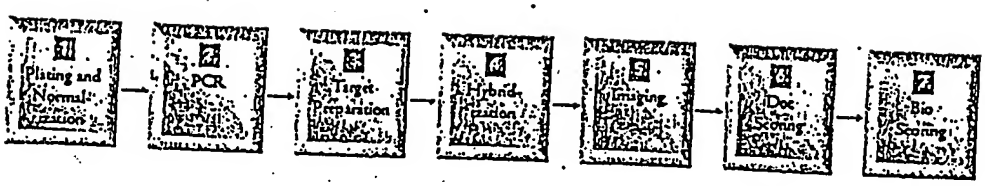
1
Plating and Normalization
2
PCR
3
Target Preparation
4
Hybridization
5
Imaging
6
Doc Scoring
7
Bio Scoring

FIG. 11

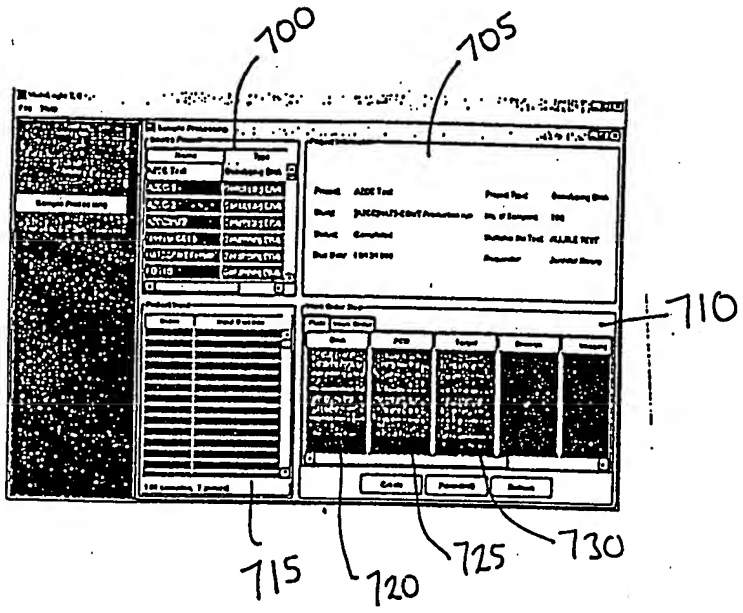

FIG. 12

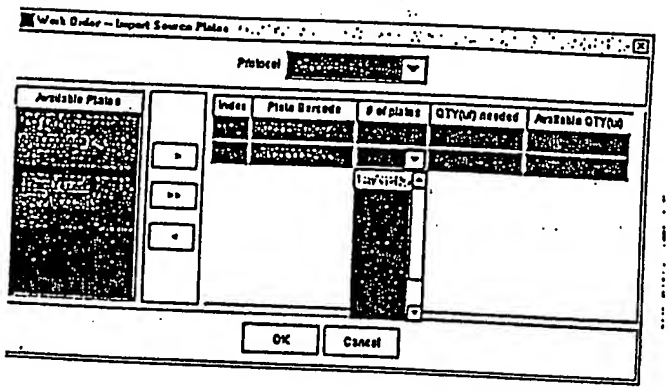
Work Order – Import Source Plates
Protocol
Available Plates
Index
Plate Barcode
# of plates
QTY(ul) needed
Available QTY(ul)
OK
Cancel

FIG. 13

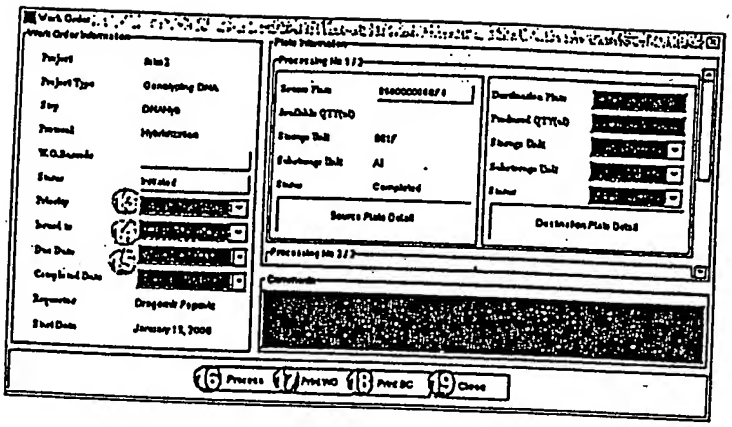
Project
Project Type
Step
Personal
Status
Priority
Send to
Due Date
Completed Date
Sequence
Start Date
Source Plate Detail
Destination Plate Detail
Comments
16 Process
17 Print WO
18 Print BC
19 Close

FIG. 14

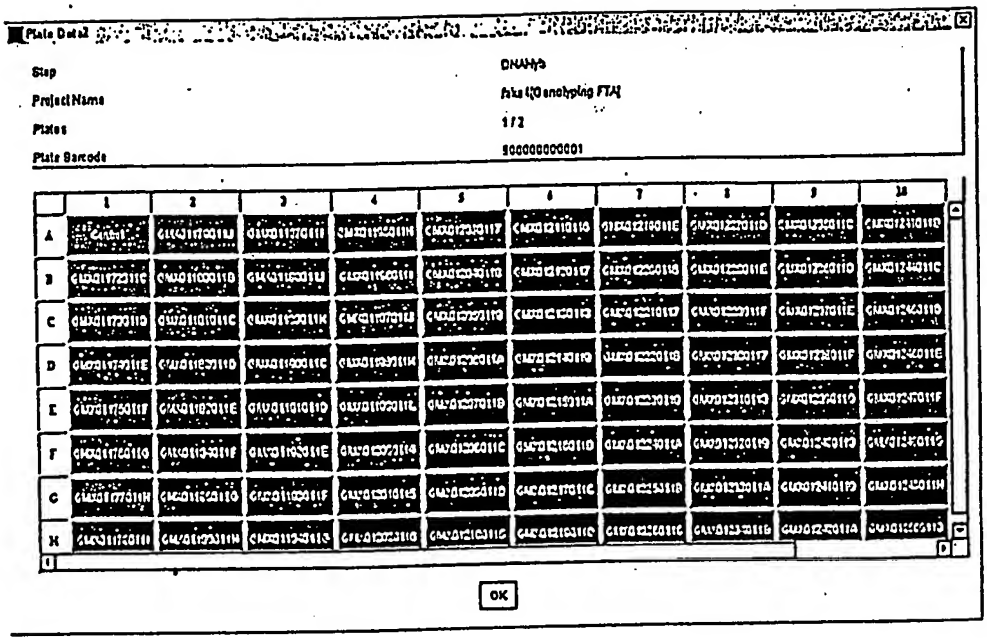
Plate Data2
Step
DNA分析
Project Name
Plates
1 / 2
Plate Barcode
OK

FIG. 15

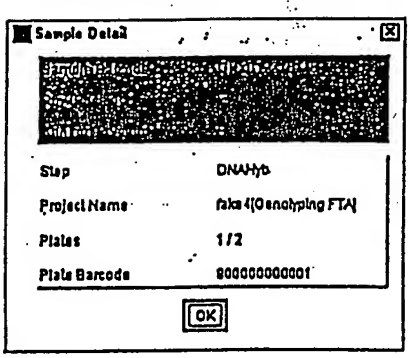
Sample Detail
Step
DNA-Hy
Project Name
fake 4 (Genotyping FTA)
Plates
1/2
Plate Barcode
000000000001
OK

FIG. 16

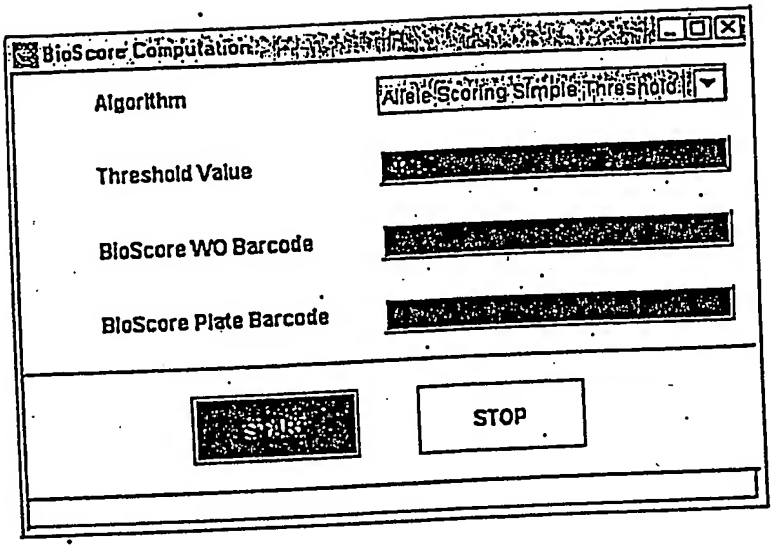
BioScore Computation
Algorithm
Allele Scoring Simple Threshold
Threshold Value
BioScore WO Barcode
BioScore Plate Barcode
STOP

FIG. 17

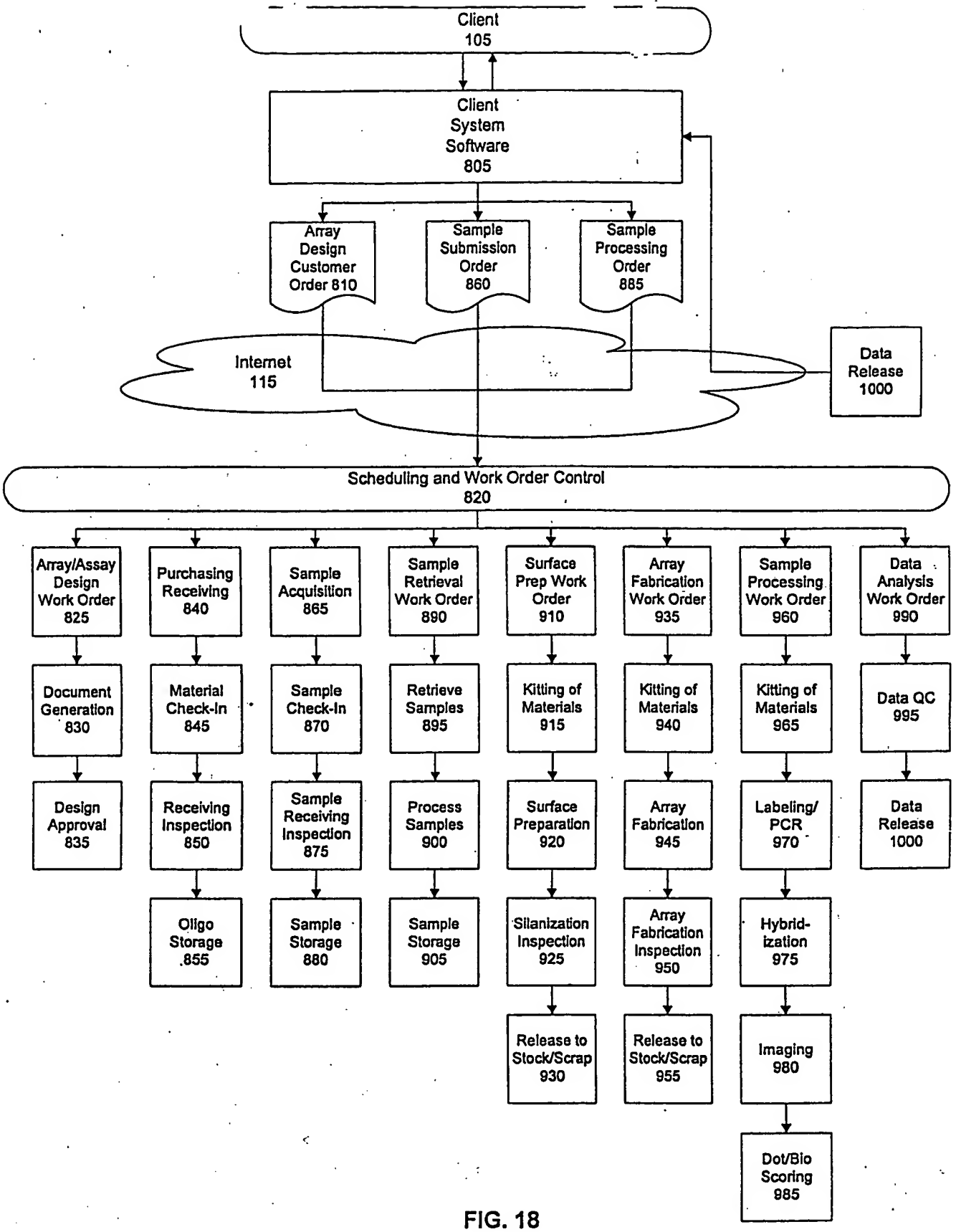
Client
105
Client System Software
805
Array Design Customer Order 810
Sample Submission Order
860
Sample Processing Order
885
Internet
115
Data Release
1000
Scheduling and Work Order Control
820
Array/Assay Design Work Order
825
Purchasing Receiving
840
Sample Acquisition
865
Sample Retrieval Work Order
890
Surface Prep Work Order
910
Array Fabrication Work Order
935
Sample Processing Work Order
960
Data Analysis Work Order
990
Document Generation
830
Material Check-In
845
Sample Check-In
870
Retrieve Samples
895
Kitting of Materials
915
Kitting of Materials
940
Kitting of Materials
965
Data QC
995
Design Approval
835
Receiving Inspection
850
Sample Receiving Inspection
875
Process Samples
900
Surface Preparation
920
Array Fabrication
945
Labeling/ PCR
970
Data Release
1000
Oligo Storage
855
Sample Storage
880
Sample Storage
905
Silanization Inspection
925
Array Fabrication Inspection
950
Hybrid-ization
975
Release to Stock/Scrap
930
Release to Stock/Scrap
955
Imaging
980
Dot/Bio Scoring
985

FIG. 18